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- (71) Applicants:
 - Genentech, Inc.
 South San Francisco, CA 94080-4990 (US)

- BOARD OF REGENTS UNIVERSITY OF TEXAS SYSTEM Austin, TX 78701-2981 (US)
- (72) Inventor: Fendly, Brian M. Half Moon Bay, CA 94019 (US)
- (74) Representative: Cripps, Joanna Elizabeth et al Mewburn Ellis York House 23 Kingsway London WC2B 6HP (GB)

(54) Antibodies to erbB2 and their therapeutic uses

(57) Anti-ErbB2 antibodies are described which bind to an epitope in Domain 1 of ErbB2 and induce cell

death via apoptosis. Various uses for these antibodies are also described.

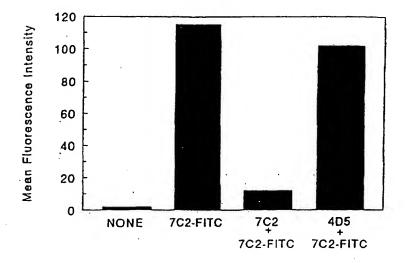


FIG. 2



EUROPEAN SEARCH REPORT

Application Numbe

		ERED TO BE RELEVANT	Relevant	CI ACCIENCATIONI OF THE
Category	Oliation of document with a of relevant pass	ndication, where appropriate, ages	to claim	CLASSIFICATION OF THE APPLICATION (Int.CL7)
D,Y	B. FENDLY ET AL.: murine monoclonal a either the human ep receptor or HER2/Ne CANCER RESEARCH, vol. 50, no. 5, 1 M pages 1550-1558, XP BALTIMORE, MD, USA * abstract * * figures * * table I *	1-3,9	C12N15/13 C07K16/32 A61K39/395 C12N5/20 G01N33/577 G01N33/68	
Y	EP 0 505 148 A (YED DEVELOPMENT COMPANY 23 September 1992 (* page 3, line 25 - * claim 16 *	LTD.) 1992-09-23)	1-3,9	
Y	HER2 overexpressing	for the treatment of breast cancer." AMERICAN ASSOCIATION , (1996-03), pages 3	1,2,4,6,	TECHNICAL FIELDS SEARCHED (Int.Cl.7) CO7K
Y	WO 96 32480 A (AMGE 17 October 1996 (19 * page 12, line 8 - * claim 12 *	96-10-17)	1,2,4,6, 7,9	
	The present search report has t	peen drawn up for all claims		
	Place of search	Date of completion of the search	·	Examiner
	THE HAGUE	19 July 2001	Noo	ij, F
X : parti Y : parti docu A : tech O : non-	ATEGORY OF CITED DOCUMENTS cutarly relevant if taken alone cutarly relevant if combined with another innert of the same category notogical beckground written disclosure mediate document	1 : theory or principle E : earlier patent doc after the filling dal b : document clied in L : document clied fo 8 : member of the sa document	urnent, but publis e the application or other reasons	shed on, or



EUROPEAN SEARCH REPORT

EP 01 10 1031

ategory	Citation of document with in of relevant pass	idication, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
A	G. DIGIESI ET AL.: characterization of extracellular domai product GP185HER2." HYBRIDOMA, vol. 11, no. 4, Aug pages 519-527, XP00 NEW YORK, NY, USA * abstract * * table I *	"Production and murine mAbs to the n of human Neu oncogene ust 1992 (1992-08).	1,4,5,9	
	* figure 4 * * page 525, line 17	- line 22 *	į.	
A		rbB receptor rphology changes, and y anti-Her2 monoclonal	1,9	
	BIOCHEMICAL AND BIOCOMMUNICATIONS,	PHYSICAL RESEARCH		Ť
	vol. 226, no. 1, 4 September 1996 (1: 59-69, XP002027856 DULUTH, MN, USA * page 68, line 1 - * page 68, line 32	line 16 *		TECHNICAL FIELDS SEARCHED (Int.CL7)
	lines in vitro."	al antibodies which of breast cancer cell AMERICAN ASSOCIATION	1,9	
		-/		
	The present search report has b	een drawn un for all claims		
	Place of search	Date of completion of the search		Examiner
	THE HAGUE	19 July 2001	Noo	ij, F
X : parti Y : parti docu A : techi O : non-	ATEGORY OF CITED DOCUMENTS cularly relevant if taken alone cularly relevant if combined with anoth ment of the same category nological background -written disclosure mediate document	T : theory or principle E : earlier patent doc after the filing date	underlying the is ument, but publis the application of other reasons	nvention shed on, or

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EUROPEAN SEARCH REPORT

Application Number EP 01 10 1031

Category	Citation of document with indicati of relevant passages	on, where appropriate,	Relevant to daim	CLASSIFICATION OF THE APPLICATION (Int.CL7)
D,A	WO 89 06692 A (GENENTEO 27 July 1989 (1989-07-2 * claims 16,22 * * page 30, line 28 - pa	27)	1,2,4,5,	
P,X	WO 97 20858 A (AMGEN, 1 12 June 1997 (1997-06-1 * page 10, line 14 - 1 * page 11, line 26 - 1	12) ine 36 *	1-7,9	
,				1 1
				TECHNICAL FIELDS SEARCHED (Int.CI.7)
	The present search report has been o	frawn up for all claims		
	Place of search	Date of completion of the search		Examiner
X : part	THE HAGUE ATEGORY OF CITED DOCUMENTS icutarly relevant if taken alone icutarly relevant if combined with another	E : earlier patent after the filing	ciple underlying the indocument, but publis	ij, F nvention shed on, or
doci A : lect O : non	ument of the same category inological background written disclosure imediate document	L : document cite	d for other reasons a same palent family	, corresponding

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 01 10 1031

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

19-07-2001

	Patent documer ed in search rep		Publication date		Patent family member(s)	Publication date
EP	505148	Α	23-09-1992	AU	1298392 A	24-09-19
				CA	2063239 A	18-09-19
				FI	921133 A	18-09-19
				JP	7224089 A	22-08-19
				MX	9201173 A	30-10-19
				NO	921040 A	18-09-19
				NZ	242000 A	25-03-19
				ZA	9201944 A	25-11-19
WO	9632480	Α	17-10-1996	US	5783404 A	21-07-19
				AU	5448196 A	30-10-19
WO	8906692	Α	27-07-1989	JP	11335297 A	07-12-19
			,	JP	11255666 A	21-09-19
				JP	3502885 T	04-07-19
				US	6165464 A	26-12-20
	·			US	5677171 A	14~10-19
				US	5720937 A	24-02-19
				บร	5772997 A	30-06-19
				US	5725856 A	10-03-19
				ÜS	5770195 A	23-06-19
				US	5720954 A	24-02-19
WO	9720858	Α	12-06-1997	US	5783186 A	21-07-19
				AU	723492 B	31-08-20
				AU	1278497 Å	27-06-19
				CA	2236913 A	12-06-19
				EP	0865448 A	23-09-19
						·
			Official Journal of the Europe			